

Control of the TV

- The TV can be controlled from a PC, control panels and other devices using the RS-232C or IP.
- Use a cross-type RS-232C cable, ETHERNET cable (commercially available) or wireless LAN for the connections.

NOTE

- This operation system should be used by a person who is accustomed to using computers.

■ Communication conditions for IP

Connect to the TV with the following settings made for IP on the PC.

IP protocol:	TCP/IP
Host IP address:	Set the IP address on the TV menu
Service:	None (Do not select Telnet or SSH)
TCP port#:	Set a port number on the TV menu (Control port)

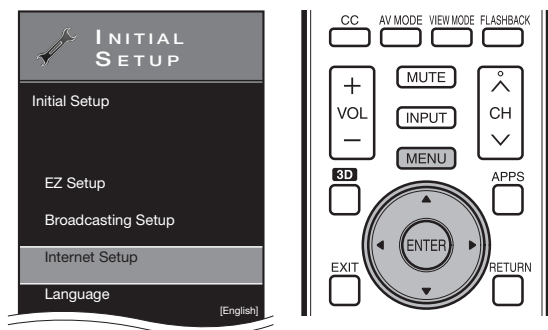
When you set your ID and password on the TV menu, you need to enter them as soon as you connect to the TV.

NOTE

- The connection will be cut off when there has been no communication for 3 minutes.

IP Control Setup

Example



- Press **MENU** to display the MENU screen, and then press **▲/▼** to select "Initial Setup".
- Press **▲/▼** to select "Internet Setup", and then press **ENTER**.
- Press **▲/▼** to select "Network Setup", and then press **ENTER**.
- Press **▲/▼** to select "IP Control Setup", and then press **ENTER**.
- Press **◀/▶** to select "Change", and then press **ENTER**.
- To use IP Control, press **◀/▶** to select "Enable", and then press **ENTER**.
- Set the device name.
- Set your login ID and password.
- Set the port to use with IP Control.
- Confirm the settings, and then press "OK".

■ Communication conditions for RS-232C

Set the RS-232C communication settings on the PC to match the TV's communication conditions.

The TV's communication settings are as follows:

Baud rate:	9,600 bps
Data length:	8 bits
Parity bit:	None
Stop bit:	1 bit
Flow control:	None

■ Communication procedure

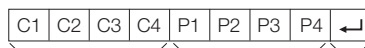
Send the control commands from the PC via the RS-232C or IP.

The TV operates according to the received command and sends a response message to the PC.

Do not send multiple commands at the same time. Wait until the PC receives the OK response before sending the next command.

■ Command format

Eight ASCII codes + CR



Command 4-digits Parameter 4-digits Return code

Command 4-digits: Command. The text of four characters.

Parameter 4-digits: Parameter 0-9, x, blank, ?

■ Parameter

Input the parameter values, aligning left, and fill with blank(s) for the remainder. (Be sure that 4 values are input for the parameter.)

When the input parameter is not within an adjustable range, "ERR" returns. (Refer to "Response code format".) Any numerical value can replace the "x" on the table.

0			
0	0	0	9
-	3	0	

When "?" is input for some commands, the present setting value responds.

?			
?	?	?	?

■ Response code format

Normal response



Return code (0DH)

Problem response (communication error or incorrect command)



Return code (0DH)

Using a PC

■ Command table

- Commands not indicated here are not guaranteed to operate.

CONTROL ITEM		COMMAND		PARAMETER		CONTROL CONTENTS			
POWER ON COMMAND SETTING		R	S	P	W	0	Off	The Power On command rejected.	
						1	On [RS-232C]	The Power On command accepted.	
						2	On [IP]	The Power On command accepted. When the power is in standby mode, commands also go to waiting status and so power consumption is just about the same as usual. With the commands in waiting status, the Power LED on the front of the TV lights up.	
POWER SETTING		P	O	W	R	0	Power Off	It shifts to standby.	
						1	Power On	Power On	
INPUT SELECTION	TOGGLE	I	T	G	D	x	(Toggle)	It input-switches by the toggle. (It is the same as an input change key)	
	TV	I	T	V	D	0		It input-switches to TV. (A channel remains as it is. (Last memory))	
1-8		I	A	V	D	*		1: HDMI 1, 2: HDMI 2, 3: HDMI 3, 4: HDMI 4, 5: HDMI5, 6: COMPONENT, 7: VIDEO1, 8: VIDEO2, 9: PC	
AV MODE SELECTION		A	V	M	D	*		0: (Toggle), 1: STANDARD, 2: MOVIE, 3: GAME, 4: USER, 5: DYNAMIC (Fixed), 6: DYNAMIC, 7: PC, 8: x.v. Color, 14: STANDARD (3D), 15: MOVIE (3D), 16: GAME (3D), 17: MOVIE (THX), 18: MOVIE (3D THX), 100: OPTIMUM, 110: ISF DAY, 111: ISF NIGHT, 300: ELITE PURE	
								Although it can choose now, it is toggle operation in inside. 110, 111: For an ISF (110 or 111) mode, adjustments by an ISF-certificated technician are required.	
VOLUME		V	O	L	M	*	*	Volume (0-60)	
POSITION	H-POSITION	H	P	O	S	*	*	The screen position variable ranges depend on the View Mode or the signal type. The ranges can be seen on the position-setting screen.	
	V-POSITION	V	P	O	S	*	*		
	CLOCK	C	L	C	K	*	*	Only PC mode. (0-180)	
	PHASE	P	H	S	E	*	*	Only PC mode. (0-40)	
VIEW MODE		W	I	D	E	*		0: (Toggle) [AV], 1: Side Bar [AV], 2: S.Stretch [AV] 3: Zoom [AV], 4: Stretch [AV], 5: Normal [PC] 6: Zoom [PC], 7: Stretch [PC], 8: Dot by Dot [PC] [AV], 9: Full Screen [AV] 10: Auto [USB-Video, DLNA-Video or Internet applications], 11: Original [USB-Video, DLNA-Video or Internet applications]	
								0: Although it can choose now, it is toggle operation in inside. 1: Only available when 4:3 signal is being input. 5, 6: Only available when 4:3 signal is being input. 8: [PC] Available except when UXGA is being input. [AV] Only available when 1080i/p is being input. 9: Only available when 720p is being input. 10, 11: Available when USB-Video, DLNA-Video or Internet application is used.	
MUTE		M	U	T	E	*		0: (Toggle), 1: On, 2: Off	
SURROUND		A	C	S	U	*		0: (Toggle), 1: Normal, 2: Off, 4: 3D Hall, 5: 3D Movie, 6: 3D Standard	
AUDIO SELECTION		A	C	H	A	x		(Toggle)	
SLEEP TIMER		O	F	T	M	*		0: Off, 1: OFF TIMER - 30 MIN., 2: OFF TIMER - 60 MIN., 3: OFF TIMER - 90 MIN., 4: OFF TIMER - 120 MIN.	
CHANNEL	DIRECT CHANNEL (ANALOG)	D	C	C	H	*	*	The channel number of TV (1-135)	An input change is included if it is not TV display. In Air, 2-69ch is effective. In Cable, 1-135ch is effective.
		D	A	2	P	*	*	(0100-9999)	DIGITAL Air (Two-Part numbers, 2-digit plus 2-digit)
		D	C	2	U	*	*	(1-999)	DIGITAL Cable (Two-Part numbers, 3-digit plus 3-digit) Front half of DIGITAL CABLE CHANNEL NO. (Designate major channel)
		D	C	2	L	*	*	(0-999)	DIGITAL Cable (Two-Part numbers, 3-digit plus 3-digit) Rear half of DIGITAL CABLE CHANNEL NO. (Designate minor channel)
		D	C	1	0	*	*	(0-9999)	DIGITAL Cable (One-Part numbers, 5-digit, less than 10,000)
		D	C	1	1	*	*	(0-6383)	DIGITAL Cable (One-Part numbers, 5-digit, more than 10,000)
	CH UP	C	H	U	P	x		The channel number of TV +1	If it is not TV display, it will input-switch to TV. (same function as CH▲)
	CH DOWN	C	H	D	W	x		The channel number of TV -1	If it is not TV display, it will input-switch to TV. (same function as CH▼)
CC		C	L	C	P	x		(Toggle) Toggle operation of a closed caption.	
DEVICE NAME		T	V	N	M	1		The device name set in "IP Control Setup" is displayed.	
MODEL NAME		M	N	R	D	1		The model name of the TV	
SOFTWARE VERSION		S	W	V	N	1		The current version of the TV software is displayed.	
IP PROTOCOL VERSION		I	P	P	V	1		The currently supported version of IP protocol is displayed.	
3D		T	D	C	H	*		0: 3D Off 1: 2D → 3D 2: SBS 3: TAB 4: 3D → 2D (SBS) 5: 3D → 2D (TAB) 6: 3D auto 7: 2D auto	
REMOTE CONTROL BUTTONS		R	C	K	Y	*		0-9: 0-9, 10: DOT, 11: ENT, 12: POWER, 13: DISPLAY, 14: POWER (SOURCE) 15: ◀◀, 16: ▶▶, 17: ▶▶, 18: ■, 19: ■◀◀, 20: ■, 21: ▶▶■, 22: ●REC, 23: LINK CTRL, 24: SLEEP, 25: ■REC STOP, 26: POWER SAVING, 27: CC, 28: AV MODE, 29: VIEW MODE, 30: FLASHBACK, 31: MUTE, 32: VOL -, 33: VOL +, 34: CH ▲, 35: CH ▼, 36: INPUT, 38: MENU, 39: APPS, 40: ENTER, 41: ▲, 42: ▼, 43: ◀, 44: ▶, 45: RETURN, 46: EXIT, 47: FAVORITE CH, 48: 3D Surround, 49: AUDIO, 50: A (red), 51: B (green), 52: C (blue), 53: D (yellow), 54: FREEZE, 55: FAV APP 1, 56: FAV APP 2, 57: FAV APP 3, 58: 3D, 59: NETFLIX	

NOTE

- If an underbar () appears in the parameter column, enter a space.
- If an asterisk (*) appears, enter a value in the range indicated in brackets under CONTROL CONTENTS.
- Any numerical value can replace the "x" on the table.